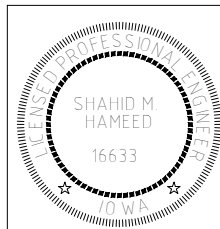


A map of the state of Wisconsin, divided into its 9 counties. Oneida County, located in the eastern part of the state, is highlighted in black. The other counties are shown in white with black outlines.

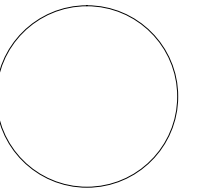


My license renewal date is December 31, 2014

Pages or sheets covered by this seal:

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CONSULTANT:

IOWA DEPARTMENT OF
NATURAL RESOURCES

502 E. 9TH ST., DES MOINES, IA 50319-0034



JONES COUNTY

PROJECT LOCATION

WATER SYSTEM UPGRADE FOR:

WAPSIPINICON STATE PARK

NO.	BY DATE	REVISION
DRAWN BY:	PROJECT NUMBER:	
D.J.H	10-06-53-01	
CHKD BY:	DATE:	
M.J.H	2014	
SHEET No:		

A.01

PROJECT MANAGER

COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
ADDRESS	502 EAST 9TH STREET
CITY,STATE,ZIP	DES MOINES, IA 50319
CONTACT	MIKE HAMEED
TELEPHONE	515-281-5728
FAX	
EMAIL	Mike.Hameed@dnr.iowa.gov

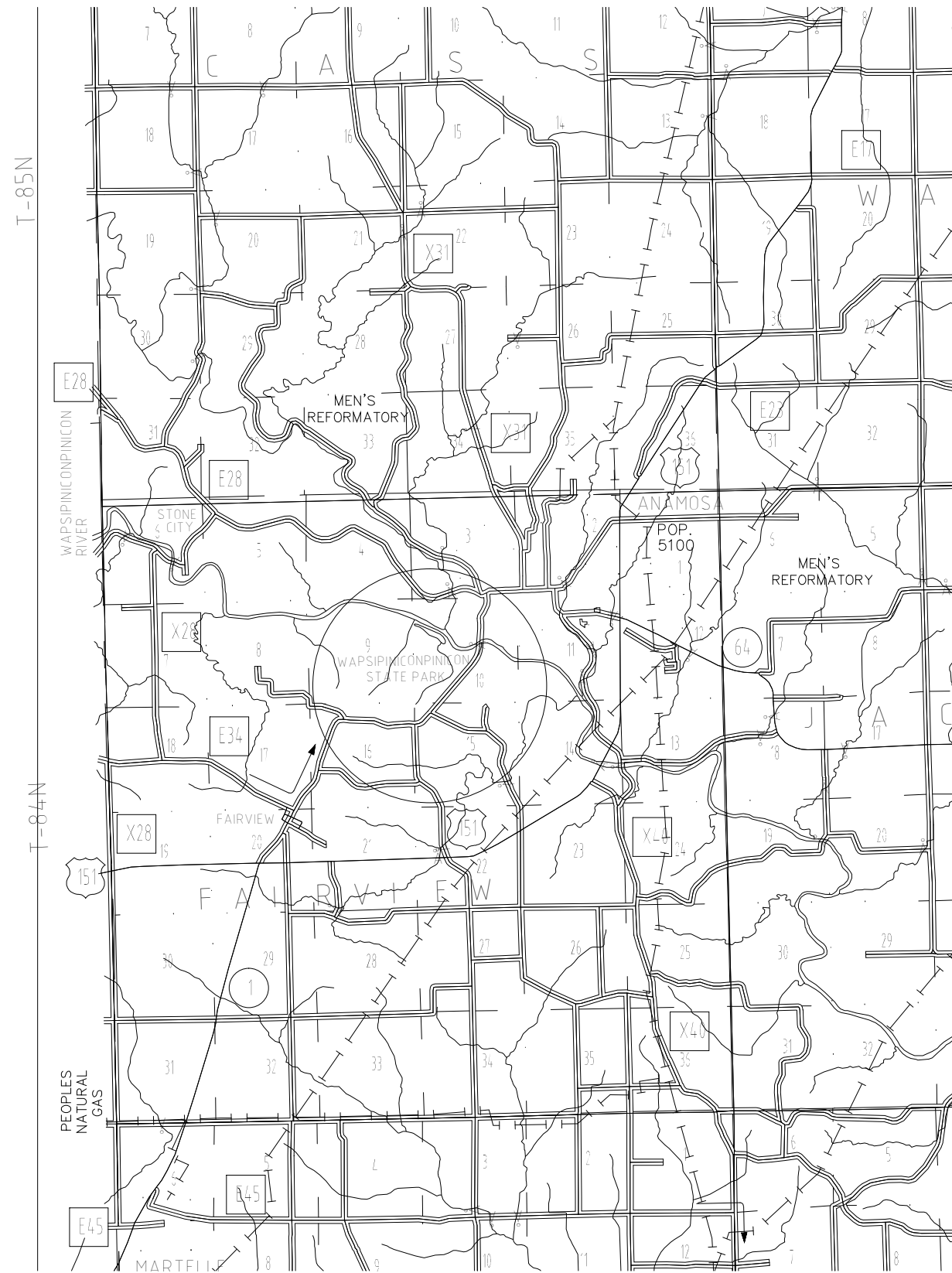
COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
ADDRESS	502 EAST 9TH STREET
CITY,STATE,ZIP	DES MOINES, IA 50319
CONTACT	HEATH DELZELL
TELEPHONE	515-979-0104
FAX	
EMAIL	Heath.Dezell@dnr.iowa.gov

THIS PROJECT CONSISTS OF INSTALLING A NEW WATER TREATMENT BUILDING, INCLUDING NEW WELL CONTROLS AND REMOVAL OF OLD PRESSURE TANKS AND CONTROLS FROM THE SCOUT LODGE AND PARK MANAGER'S RESIDENCE. A NEW 3200 FT WATER MAIN WILL LINK ALL THE PARK FACILITIES, INCLUDING MANAGER'S RESIDENCE AND ROTARY LODGE, TO ONE CENTRAL WELL AND TREATMENT SYSTEM. THE TWO OLD WELLS AT PARK MANAGERS RESIDENCE AND AT THE ROTARY LODGE WILL BE PLUGGED AND CAPPED.

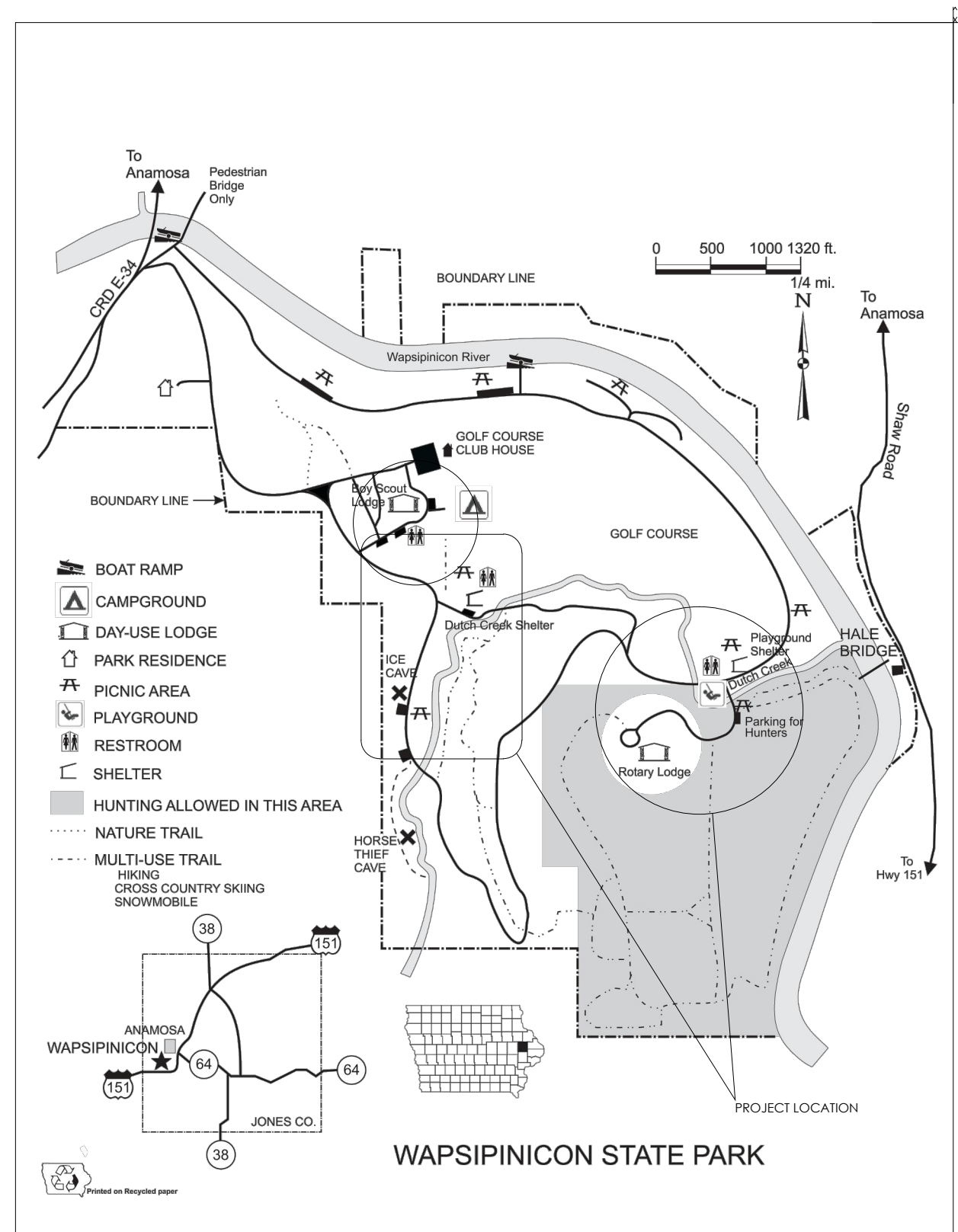
AUTHORIZATION - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT | FORESTRY

ENGINEERING BUREAU CHIEF

DATE

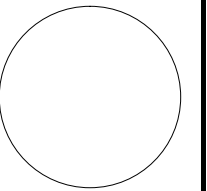


VACINITY MAP



PROJECT LOCATION

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BULLING
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROJECT LOCATION

WATER SYSTEM UPGRADE FOR:
WAPSIPINICON STATE PARK

JONES COUNTY

NO.	BY DATE	REVISION

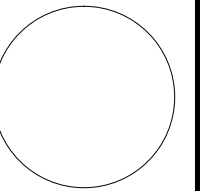
DRAWN BY: ES
PROJECT NUMBER: 10-06-53-01
CHK'D BY: MJH
DATE: 2013

SHEET NO:

A.02



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



JONES COUNTY

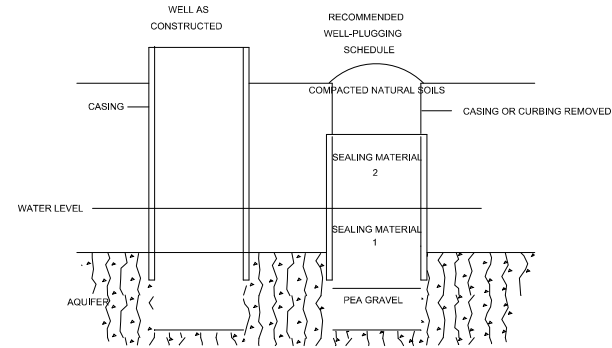
PROJECT LOCATION

WATER SYSTEM UPGRADE FOR:

WAPSIPINICON STATE PARK

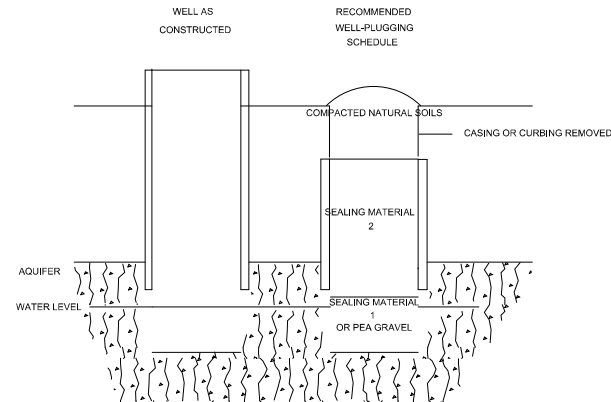
NO.	BY DATE	REVISION
DRAWN BY: D.H.		PROJECT NUMBER: 10-06-53-01
CHK'D BY: M.H.		DATE: 2014
SHEET No:		

B.01



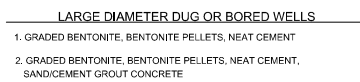
BEDROCK WELL IN CONFINED AQUIFER

1. BENTONITE PRODUCTS, NEAT CEMENT
2. BENTONITE PRODUCTS, NEAT CEMENT, SAND/GRAVEL GROUT, CONCRETE



BEDROCK WELL IN UNCONFINED AQUIFER

1. BENTONITE PRODUCTS, NEAT CEMENT
2. BENTONITE PRODUCTS, NEAT CEMENT SAND/CEMENT GROUT, CONCRETE



NOMINAL (INCHES)	SCHEDULE OR STRENGTH	O.D. INCHES	I.D. INCHES	SECTION (FT ²)	GALLONS/ LINEAL FT.	SACKS/ FT.	LINEAL FT./ SACK
2	40	2.375	2.07	.023	.17	.021	47.83
	80	4.500	1.94	.021	.15	.019	52.38
4	40	4.500	4.02	.088	.66	.080	12.50
	80		3.82	.080	.60	.073	13.75
5	40	5.563	5.04	.139	1.04	.126	7.91
	80		4.81	.126	.95	.115	8.73
6	40	6.625	6.06	.201	1.50	.182	5.47
	80		5.76	.181	1.35	.165	6.08
8	30	8.625	8.07	.355	2.66	.323	3.10
	40		7.98	.347	2.60	.316	3.17
	80		7.62	.317	2.37	.288	3.47
	30	10.75	10.13	.560	4.19	.510	1.96
	40		10.02	.548	4.10	.498	2.01
	XS		9.75	.519	3.88	.471	2.12
12	30	12.75	12.09	.797	5.96	.725	1.38
	STD		12.00	.785	5.88	.714	1.40
14	40		11.93	.777	5.81	.707	1.42
	STD	14.00	13.25	.957	7.16	.871	1.15
16	XS		13.00	.922	6.90	.838	1.19
	STD	16.00	15.24	1.268	9.49	1.153	.87
18	XS		15.00	1.227	9.18	1.116	.90
	STD	18.00	17.25	1.623	12.14	1.476	.68
20	STD	20.00	19.25	2.021	15.12	1.837	.54
24	STD	24.00	23.25	2.948	22.06	2.680	.37
30	STD	30.00	29.25	4.666	34.91	4.242	.24

REFERENCE: SEE IOWA DNR PUBLICATION SERIES NO. 15 FOR FURTHER DETAILS

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROJECT LOCATION

WATER SYSTEM UPGRADE FOR:
WAPSIPINICON STATE PARK

JONES COUNTY


NO.	BY DATE	REVISION
DRAWN BY: D.H	PROJECT NUMBER: 10-06-53-01	
CHK'D BY: M.J.H	DATE: 2014	
SHEET No:		

ESTIMATED PROJECT QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
1	MOBILIZATION		1 LS
2	3 INCH PVC CLASS 200 OR HDPE DR 11 WATER MAIN (TRENCHED OR BORED		3114 L.F
3	DETECTABLE WARNING TAPE, 3" WATER OR TRACER WIRE #12 IF BORED		3888 L. F
4	3 INCH GATE VALVE WITH VALVE BOX		2 EACH
5	CLEARING & GRUBBING		1 LS
6	GRADING FOR THE BUILDING		1 LS
7	10'-6" x 20'-6" PRECAST HUFFCUTT BUILDING (INSTALLED)		1 LS
8	ELECTRICAL SYSTEM COMPLETE FOR TREATMENT BUILDING, NEW PUMP CONTROLS, ELECTRICAL PANEL, HEATER, LIGHTS ETC., COMPLETE WORKING SYSTEM		1 LS
9	MECHANICAL SYSTEM COMPLETE WITH MANIFOLD, WATER METER, VALVES, PRESSURE SWITCH, GUAGE, RELIEF VALVE, WELL DRAW-DOWN EQUIPMENT, SCH. 80 PVC PIPING ETC.		1 LS
10	CLOSED CELL SPRAY INULATION FOR THE BUILDING		1 LS
11	LIQUID CHLORINE INJECTION PUMP & CONTAINER		1 LS
12	AMTROL WELL-X-TROL WX-350D 119 GAL PREESSURE TANKS OR APPROVED EQUAL		4 EACH
13	ELECTRIC SERVICE TO WELL IN CONDUIT (APROX: 260 FEET)		1 LS
14	STATIC WATER LEVEL LINE & GUAGE COMPLETE WITH INSTALLATION (APROX: 260 FEET)		1 LS
15	ELECTRICAL SERVICE TO THE BUILDING FROM TRANSFORMER (APROX: 300 FT)		1 LS
16	NEW WATER CONNECTIONS FROM WELL TO TREATMENT BUILDING -3 INCH PVC CLASS 200 OR HDPE DR 11 WATER MAIN (TRENCHED OR BORED)		260 L.F
17	CLASS "A" CRUSHED STONE FOR THE TREATMENT BUILDING BASE		13 TON
18	48" DEEP X 12" WIDE TRENCH FOOTING FOR THE BUILDING AS DESCRIBED IN THE SPECS. INCLUDING EXCAVATION FOR THE FOOTING		1 LS
19	3 INCH PVC CLASS 200 OR HDPE DR 11 WATER MAIN (TRENCHED OR BORED) FROM NEW BUILDING TO EXISTING WATERMAINS. INCLUDES DISCONNECTING THE EXISTING MAINS FROM LODGE & NEW CONNECTIONS FROM THE TREATMENT BUILDING		516 LF
20	DRAIN DOWN PIT AT THE PUBLIC RESTROOM		1 LS
21	SYSTEM DISINFECTION		1 LS
22	REMOVE ALL WELL CONTROLS & PIPING FROM SCOUT LODGE AND DISPOSE		1 LS
23	DEMO PRESSURE TANK IN LODGE & DISPOSAL		1 LS
24	DEMO PRESSURE TANK IN RESIDENCE, REMOVE ELECTRICAL CONTROLS & DISPOS		1 LS
25	CONNECT NEW WATER MAIN TO THE RESIDENCE		1 LS
26	CONNECT NEW WATER MAIN TO ROTARY LODGE		1 LS
27	PLUG EXISTING WELL IN MANAGER'S RESIDENCE		1 LS
28	PLUG EXISTING WELL AT ROTARY LODGE, REMOVE BUILDING & CONTROL INCLUDING DISPOSAL		1 LS
29	SITE RESTORATION (ALL)		1 LS

C.01



SCALE: 1"=300'



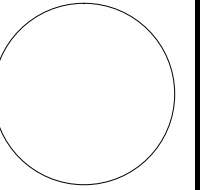
A horizontal scale bar with three segments. The first segment is labeled '0'', the second '300'', and the third '600''.

NO.	BY DATE	REVISION
DRAWN BY: D.H	PROJECT NUMBER: 10-06-53-01	
CHKD BY: M.H	DATE: 2014	
SHEET NO:		

D.01



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



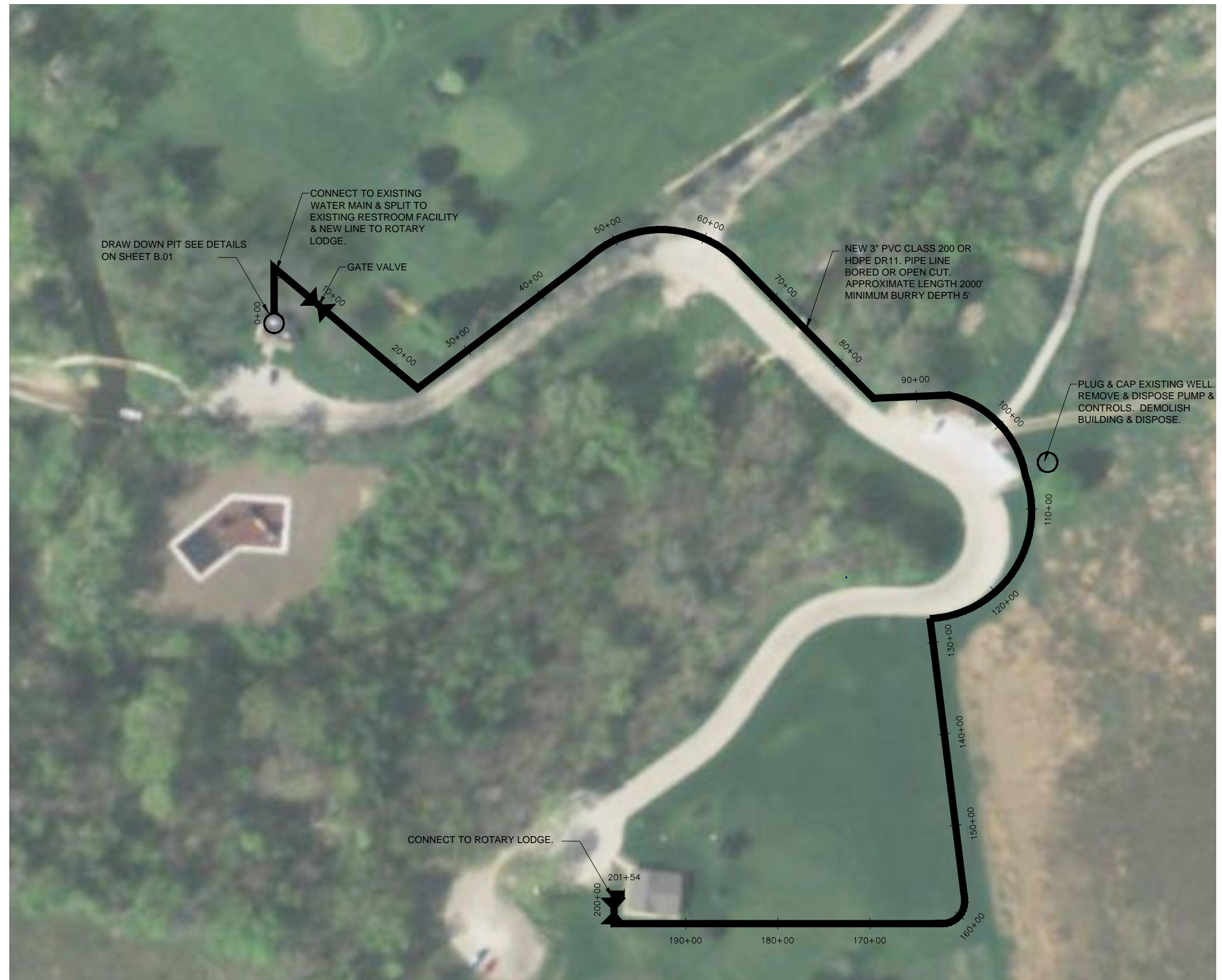
PROJECT LOCATION

WATER SYSTEM UPGRADE FOR:
WAPSIPINICON STATE PARK

JONES COUNTY

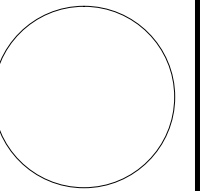
NO.	BY DATE	REVISION
DRAWN BY:	PROJECT NUMBER:	
D.H	10-06-53-01	
CHKD BY:	DATE:	
M.H	2014	
SHEET No:		

D.02

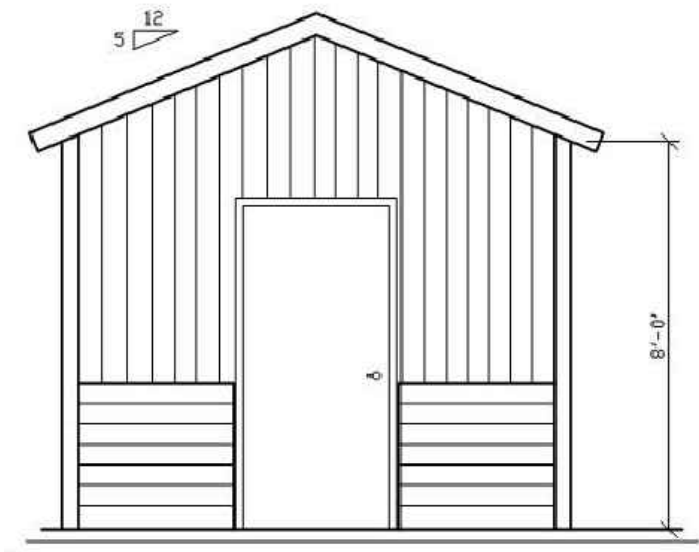


SCALE: 1"=300'

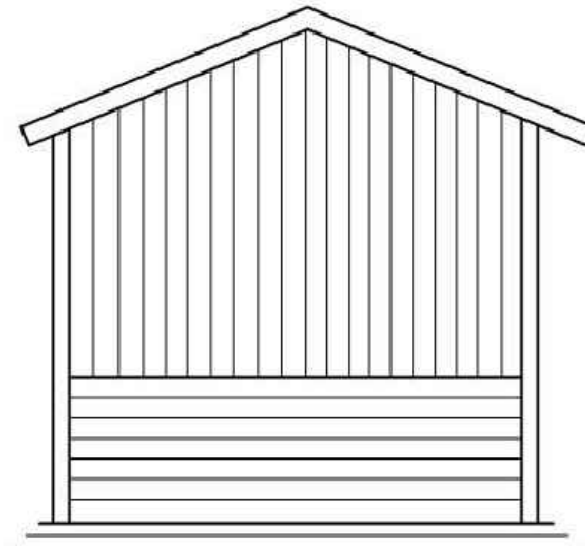
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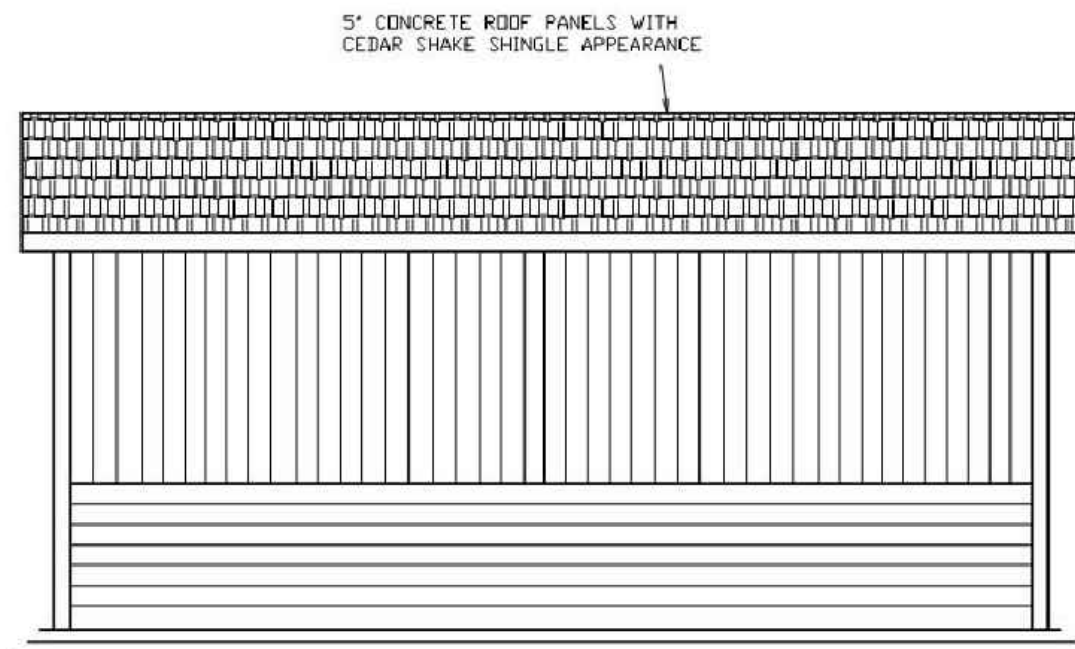
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DRAWN BY: D.H	PROJECT NUMBER: 10-06-53-01	
CHKD BY: M.H	DATE: 2014	
SHEET No:		



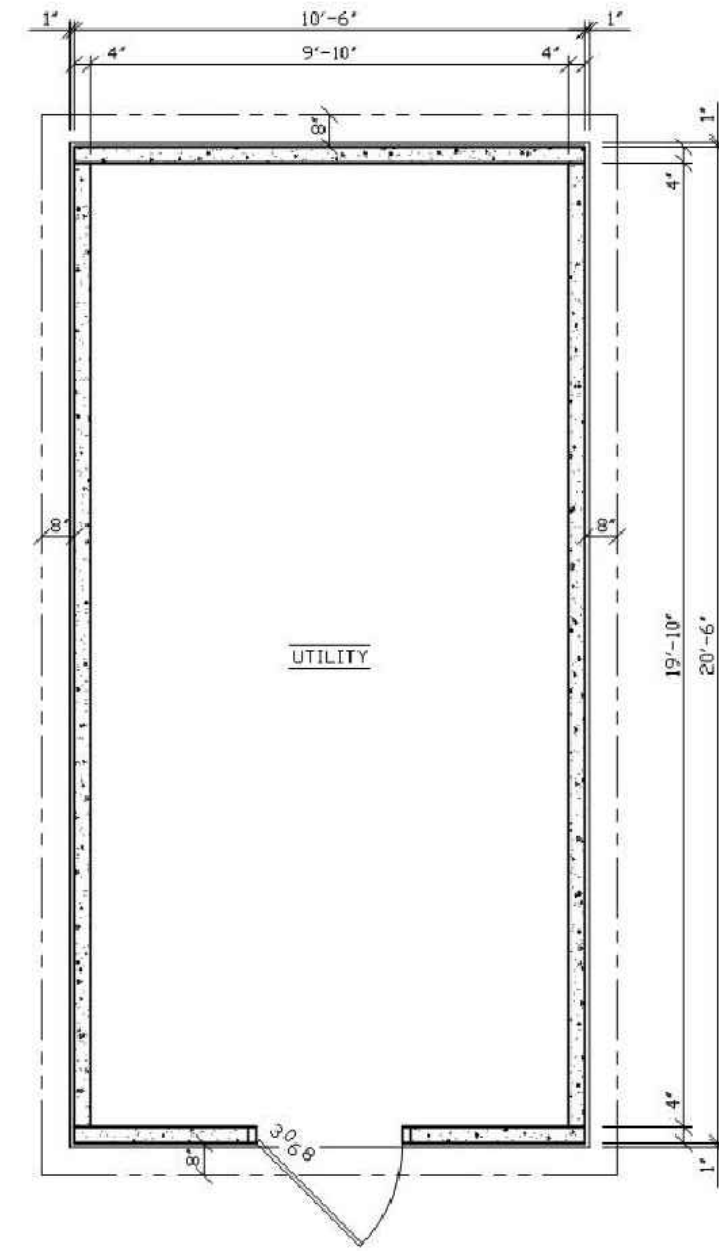
FRONT ELEVATION
SCALE: 1/4" = 1'-0"



REAR ELEVATION
SCALE: 1/4" = 1'-0"



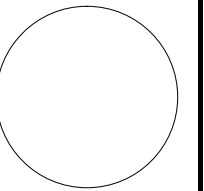
SIDE ELEVATION (TYP.)
SCALE: 1/4" = 1'-0"



FLOOR PLAN
SCALE: 1/4" = 1'-0"

HUFFCUT PRECAST BUILDING

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROJECT LOCATION

WATER SYSTEM UPGRADE FOR:

WAPSIPINICON STATE PARK

JONES COUNTY

NO.	BY	REVISION
	DATE	

DRAWN BY: DJH	PROJECT NUMBER: 10-06-53-01
CHECKED BY: MJH	DATE: 2014
SHEET NO.:	

D.04

GENERAL:

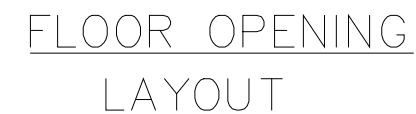
1. THE GENERAL LOCATION OF THE TREATMENT BUILDING SHALL BE AS SHOWN ON THE PLANS, THE SPECIFIC LOCATION WILL BE STAKED BY THE D.N.R. CONSTRUCTION INSPECTOR.
2. FINISHED FLOOR ELEVATION FOR THE BUILDING SHALL BE AS SHOWN ON THE PLANS OR AS DETERMINED BY THE D.N.R. CONSTRUCTION INSPECTOR.
3. REGRADE THE AREA SURROUNDING THE STORAGE BUILDING AS NECESSARY AND AS DIRECTED BY THE D.N.R. CONSTRUCTION INSPECTOR.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN ON THE DRAWINGS AT THE JOB SITE AND SHALL NOTIFY THE D.N.R. CONSTRUCTION INSPECTOR OF ANY OMISSIONS, DISCREPANCIES AND/OR CONFLICT BEFORE PROCEEDING WITH ANY CONSTRUCTION.
5. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
6. THE CONTRACTOR SHALL SECURE ALL REQUIRED BUILDING PERMITS AND SHALL PERFORM ALL WORK TO CONFORM WITH APPLICABLE BUILDING CODES.
7. THE PREFABRICATED BUILDING PROPOSED FOR THE SITE IS A 10.5' X 20.5' HUFFCUT UTILITY BUILDING MANUFACTURED BY HUFFCUT CONCRETE INC. CHIPPEWA FALLS, WI.
8. THE PRE-CAST FLOOR SLAB SHALL BE INSTALLED ON TRENCH FOOTING, AS FULLY DESCRIBED IN PROJECT'S SPECIFICATIONS.
9. THE CONTRACTOR WILL SPRAY FOAM INSULATE THE BUILDING AS PER SPECS.

MECHANICAL:

1. THIS DRAWING IS INTENDED TO SHOW ONLY THE BASIC COMPONENTS AND NOT AN ACTUAL LAYOUT OF THE SYSTEM. IN ADDITION, THE CONTRACTOR SHALL FURNISH AND INSTALL THE VARIOUS SHUT-OFF VALVES, CHECK VALVES, DRAIN-DOWN VALVES, SAMPLING TAPS, ETC., TO PROVIDE A COMPLETE FUNCTIONING SYSTEM IN ACCORDANCE WITH CURRENT INDUSTRY PRACTICE AND ALL APPLICABLE CODES.
2. PRESSURE TANK AND ACCESSORIES, CHLORINE TREATMENT SYSTEM, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS FURNISHED BY THE VARIOUS MANUFACTURERS.
3. PRESSURE TANK SHALL BE AMTROL INC. 110 GAL. WELL-X-TROL WX-406 PRE-PRESSURIZED BLADDER TYPE TANK.
4. THE PRESSURE TANK SHALL HAVE A SHUTOFF VALVE INSTALLED ON THE INLET/OUTLET PIPE.
5. THE PRESSURE TANK TO CUT IN AT 40 PSI AND CUT OUT AT 60 PSI.
6. THE PERISTALTIC METERING PUMP SHALL BE STENNER MODEL 45MPH2 OR APPROVED EQUAL (SEE SPEC. SECTION 02660).
7. PROVIDE A UNISTRUT SUPPORT SYSTEM FOR ALL PIPING, INCLUDING THE WATER METERS, APPROX. 2'-0" ABOVE THE PLANT FLOOR WHEREVER NECESSARY.
8. PIPING SHALL BE FABRICATED WITH UNIONS TO ALLOW DISCONNECTING INDIVIDUAL COMPONENTS OF THE SYSTEM.
9. ALL BURIED PIPING SHALL HAVE THRUST BLOCKS AT VERTICAL RISERS.
10. THE CONTRACTOR SHALL SUBMIT FIVE COPIES OF SHOP DRAWINGS FOR SUCH ITEMS AS PRESSURE TANKS, WATER METERS, PRESSURE GAUGES, PRESSURE SWITCHES, RELIEF VALVES, DRAIN VALVE, WELL EQUIPMENT, CHLORINE TREATMENT EQUIPMENT, DRAWDOWN TEST EQUIPMENT, ETC., FOR APPROVAL BEFORE PLACING ORDER WITH SUPPLIER.

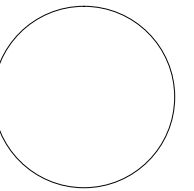
ELECTRICAL:

1. ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE IOWA STATE BUILDING CODE AND THE N.E.C. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMITS AND ARRANGING FOR ELECTRICAL INSPECTION AS REQUIRED BY THE STATE OF IOWA ELECTRICAL INSPECTION PROGRAM. SEE SPEC. SECTION 16000, PARAGRAPH 3.06.
2. ELECTRICAL POWER ENTRANCE AND MAIN DISCONNECT: ENTRANCE PANEL SHALL BE 150A, 120/240V. PROVIDE 1-20A LIGHTING CIRCUIT, 1-20A CIRCUIT FOR TWO COVENIENCE OUTLETS, 1-20A CL2 PUMP CIRCUIT, 1-20A CONTROL PANEL CIRCUIT, 1-20A 2P HEATER CIRCUIT AND 1-40A 2P WELL PUMP CIRCUIT. ALL WIRING SHALL BE COPPER. FURNISH AND INSTALL CONDUIT THROUGH THE FLOOR FOR BURIED SERVICE ENTRANCE AND POWER AND CONTROL CABLES TO THE WELL AND TRANSFORMER AS REQUIRED.
3. FURNISH AND INSTALL TWO LITHONIA LIGHTING SB-4-32-MVOLT-1/4-GEBOIS FLUORESCENT FIXTURES WITH F32-T8 SP41 LAMPS FOR INTERIOR LIGHTING.
4. FURNISH AND INSTALL EXTERIOR NIGHT LIGHT KENALL 5150 WITH PHOTO-ELECTRIC CONTROL 9051 AND PUMP RUNNING INDICATOR LIGHT SYSTEM. PROVIDE SEPARATE CIRCUIT FOR LIGHTING SO THAT PHOTO CONTROL CAN BE OVER-RIDDEN BY TIMER AT SERVICE PANEL. PROVIDE ADJUSTABLE TIMER.



- A - 6" DIA. HOLE - WATER FROM WELL
B - 4" X 8" OPENING - CONDUIT TO ENTRANCE PANEL
C - 4" X 8" OPENING - CONDUIT FROM WELL
D - 14" DIA. HOLE - FLOOR DRAIN
E, F, - 6" DIA. HOLES - WATER DISTRIBUTION

CONSULTANT:

IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



JONES COUNTY

PROJECT LOCATION

WAPSIPINCON STATE PARK

NO.	BY DATE	REVISION
DRAWN BY: D.H	PROJECT NUMBER: 10-06-53-01	
CHKD BY: M.H	DATE: 2014	
SHEET No:		

D.05